# IN THE UNITED STATES PATENT AND TRADEMARK, OFFICE

In re Application of	) .
Panos PAPANASTASIOU	)
Application No.: 10/009,505	) Group Art Unit:
Filed: December 5, 2001	) Examiner:
Title: CAVITY STABILITY PREDICTION METHOD FOR WELLBORES	) Docket N°: 57.0328-WO

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Box PCT, Washington, D.C. 20231 on November 11, 2002.

Ruth A. Schreiber Date

# PETITION UNDER 37 CFR 1.181 TO RESET THE PERIOD FOR RESPONSE

Assistant Commissioner for Patents Box PCT Washington, D.C. 20231

ATTENTION: PCT Legal

11/21/2002 LLANDGRA 00000052 190615 10009505

01 FC:1460 Sir: 130.00 CH

Applicant respectfully requests the Period for Response to the Notification of Missing Requirements Under 35 U.S.C. 371 in the United States Designated/Elected Office (DO/EO/US) be reset and the enclosed Submission of Missing Parts be accepted as being timely filed.

Applicant filed this application on December 5, 2001 by Express Mail and applicant received the return postcard date stamped by the US PCT/PTO office with the filing date and Serial Number. (Copies of the Express Mail Certificate, Label, and

PETITION UNDER 37 CFR 1:181 TO RESET THE PERIOD FOR RESPONSE Paper Date: November 11, 2002 Attorney Docket 57.0328-WO Appl Serial No. 10/009,505 Page 2

postcard are enclosed). Applicant has never received an Official Filing Receipt in this application.

On February 6, 2002, applicant filed the Information Disclosure Statement, PTO-1449 form and references. (Copies of these documents, other than the references, along with a copy of the return postcard with the PCT/PTO date stamp are enclosed).

On July 23, 2002, applicant filed a Status Inquiry Letter, which was received and date stamped on the return postcard on July 29, 2002. In this letter Applicant indicated that an Official Filing Receipt had not been received and that applicant was still waiting for the "Notice to File Missing Parts" so that applicant could file the Declaration and Power of Attorney.

Applicant's Paralegal, Ms. Ruth Schreiber, called the PCT help desk on November 7, 2002 at 9:40 a.m. to inquire into the status of this case. Ms. Schreiber spoke with Ms. Sue Wolski and requested a status check on this file. Later in the day, Ms. Wolski called Ms. Schreiber and advised Ms. Schreiber that a Notification of Missing Requirements dated February 6, 2002 had been mailed to applicant. Ms. Wolski later faxed a copy of the Notification of Missing Requirements to applicant (copy attached). A response to this Notice was due April 6, 2002. Applicant has no record of receiving this Notification. The Status Inquiry Letter was mailed in July because applicant had not received any official correspondence from the PCT Receiving Office regarding this case.

The Declaration and Assignment documents were executed on December 10, 2001 and have been in applicant's file waiting for receipt of the Notification of Missing Requirements (Copies of these documents are enclosed). Applicant has been prepared to file the Declaration in response to the Notification of Missing Requirements since the middle of December 2001.

Applicant respectfully requests that the period for response to the Notification of Missing Requirements be reset and the enclosed Submission of Missing Parts be accepted as being timely filed.

PETITION UNDER 37 CFR 1.181 TO RESET THE PERIOD FOR RESPONSE Paper Date: November 11, 2002

Auch gong

Attorney Docket 57.0328-WO Appl Serial No. 10/009,505 Page 3

Applicant believes that a fee of \$130.00 is due. However, in the event that an additional fee/credit is due, the Commissioner is authorized to charge/refund the fee/credit to Deposit <u>Account No. 19-0615</u>. Two copies of this paper are attached.

Respectfully submitted,

William B. Batzer

Registration N° 37,088

Schlumberger-Doll Research 36 Old Quarry Road Ridgefield, Connecticut 06877-4108

Phone: (203) 431-5506 Fax: (203) 431-5640 November 11, 2002

-, US57.0328-WO

APPLICANT: Panos PAPANASTASIOU

APPL NO: To be Assigned

INT'L APPL NO: PCT/GB00/02471

10/009505

FILED: 05 December 2001 JC18 Rec'd PCT/PTO 0.5 DEC 2001

INT'L FILING DATE: 22 June 2000

TITLE: CAVITY STABILITY PREDICTION METHOD FOR WELLBORES

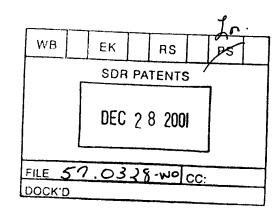
PAPERS: Express Mail Certificate No. EL442087508US

Transmittal Letter of the US Designated/Elected Office

Copy of Publ. PCT Appl WO 01/00962A1

Copy of PCT/IB/308 Form

PAPER DATE: 05 December 2001



# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	. )
Panos PAPANASTASIOU	
Appl. No.: To be Assigned Int'l Appl No.: PCT/GB00/02471	) Group Art Unit:
Filed: 05 December 2001 Int'l Filing Date: 22 June 2000	) Examiner:
For: CAVITY STABILITY PREDICTION METHOD FOR WELLBORES	) Docket N°: US57.0328-WO

# EXPRESS MAIL CERTIFICATE UNDER 37 CFR §1.10

Assistant Commissioner for Patents U.S. Patent and Trademark Office P.O. Box 2327
Arlington, VA 22202

EL442087508US

ATTENTION: Box New Patent Application

Sir:

Express Mail Label Number: EL442087508US Date of Deposit: 05 December 2001

I hereby certify that the attached US national patent application and fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR §1.10 on the date indicated above and is addressed to the Assistant Commissioner for Patents U.S. Patent and Trademark Office, P.O. Box 2327, Arlington, VA 22202.

(Signature) (Print Name)

Schlumberger-Doll Research

Patent Department
Old Quarry Road
Didacfield Connections (

Ridgefield, Connecticut 06877-4108

(203) 431-5000

C. ELOSS

POST OFFICE TO ADDRESSEE



# EL442087508US

OSIAL OSE C	NEW CONTRACTOR	Clast Data Canal		9	AL USE O		
O ZIP Code	Day of Delivery	Flat Rate Envelope	ope	Delivery Attempt	Time		Employee Signature
	Next Second			Mo. Day	☐ AM	□ PM	
ate in		Postage		Delivery Attempt	Time		Employee Signature
	12 Noon 3 PM	49		Mo. Day	☐ AM	☐ PM	
Mo. Dey Year nein	Williamy )	Return Receipt Fee	Fee	Delivery Date	Tinue		Employee Signature
	2nd Day 3rd Day			Mo. Day	AM	PM	
eight AM	Int'l Alpha Country Code	COD Fee	Insurance Fee	Signature of Addressee or Agent	or Agent		
lbs. ozs.				×			
	Acceptance Clerk Initials	Total Postage & Fees	Fees	Name - Please Print			
) Weekend   Holiday		\$		×			
THOD OF PAYMENT: press Mail Corporate Acct. No.	X069186		WAIVER O	F SIGNATURE (Domestic by to be made without obtains to be made without obtains to be left in social by the lef	Only): Addition	al merchand e of addres	WAIVER OF SIGNATURE (Domestic Only): Additional merchandise insurance is void if waiver of signature is requested. I wait delivery to be made without obtaining signature of addressee or addressee agent (if delivery employee) judges interested on the production of
teral Agency Acct. No. or stal Service Acct. No.			NO DELIVERY	Weekend Holiday		1	OBINGHY Weskand Holiday Customer Signature
FROM: (PLEASE PRINT)	PHONE (			TO: (PLEASE PRINT)		PHONE (	
_	ER-DOLL RE	SEARCH	لـ	Assista	nt Co	mmiss	Assistant Commissioner for Patents
ZHOG ETHELL	DGEFIELD CT 0687	7 0687	CT 06877-4120	U.S. Patent and Trad P.O. Box 2327 Arlington, VA 22202	tent x 232 on, V	and 1 7 A 22	U.S. Patent and Trademark Office P.O. Box 2327 Arlington, VA 22202
					2	!	
Γ	(US57.0328-WO)	8-WO)		L ATTENTL	ON:	BOX N	_ ATTENTION: Box New Patent Appl

**F**02

55/ 200

Mailing Label Label 11-F July 1997

57.0328-WO

FEB 1 5 2002

APPLICANT(S): Panos PAPANASTASIOU

APPL. NO.:

10/009,505

FILING DATE:

December 5, 2001

TITLE:

CAVITY STABILITY PREDICTION MERGED FOR

WELLBORES

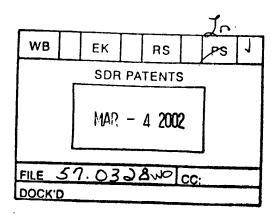
PAPERS:

Information Disclosure Statement (IDS);

Form PTO-1449; references

JC07 Rec'd PCT/PTO 1 5 FEB 2002

PAPER DATE: FEBRUARY 6, 2002



57.0328-WO

APPLICANT(S): Panos PAPANASTASIOU

APPL. NO.: 10/009,505

FILING DATE: December 5, 2001

TITLE: CAVITY STABILITY PREDICTION METHOD FOR

WELLBORES

PAPERS: Information Disclosure Statement (IDS);

Form PTO-1449; references

PAPER DATE: FEBRUARY 6, 2002

# IN THE UNIT STATES PATENT AND TRADEMA

In re Application of	)	
Panos PAPANASTASIOU	) Group Art Unit:	
Application N°: 10/009,505	) Examiner:	
Filed: December 5, 2001	) ) Attorney Docket No.:	
Title: CAVITY STABILITY PREDICTION METHOD FOR WELLBORES	) 57.0328-WO	
	is being deposited with the United States Post	

INFORMATION DISCLOSURE **STATEMENT** 

addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231.

ASSISTANT COMMISSIONER FOR PATENTS Washington, D.C. 20231

orraine Ronnlund

Sir:

In accordance with 37 C.F.R. §1.56, 1.97 and 1.98, the Applicants wish to bring the reference materials listed in the attached Form PTO-1449 to the attention of the U. S. Patent and Trademark Office. Copies of the references are provided for the Examiner's convenience.

No representation is made or intended that a complete and exhaustive prior art search has been made, or that no better references than those set forth below are available. Furthermore, this Statement does not constitute an admission that these references are properly citable against the present application as prior art.

It is respectfully requested that these references be considered by the Examiner and formally made of record in this case.

William B. Batzer

Registration N° 37,088

Respectfully submitted,

Schlumberger-Doll Research 36 Old Quarry Road Ridgefield, Connecticut 06877-4108 (203) 431-5506 Date: February 6, 2002



FORM PTO-1449

U.S. Department of Commerce Patent and Trademark Office ATTY. DOCKET NO: SERIAL NO.: 57.0328-WO 10/009,505

**APPLICANT:** Panos PAPANASTASIOU

**EXAMINER:** 

GROUP:

INFORMATION DISCLOSURE STATEMENT
BY APPLICANT
(Use several sheets if necessary)

FILING DATE:

December 5, 2001

TIC	DA	TENT	$\mathbf{D}\mathbf{\Omega}$	<b>JENTS</b>

Document Number	Date	Name	Class	Sub- class	Filing date if appropriate
3,907,034	09/23/75	Suman, Jr.	166	250	09/23/74
4,862,991	09/05/89	Hoyle et al.	181	106	09/13/88
4,881,208	11/14/89	Liu	367	35	10/27/88
4,951,267	08/21/90	Chang et al.	367	31	10/15/86
5,497,658	03/12/96	Fletcher et al.	73	151	03/25/94
5,619,475	04/08/97	Winkler	367	27	11/09/95
5,789,669	08/04/98	Flaum	73	152.51	08/13/97
5,838,633	11/17/98	Sinha	367	31	01/27/97
	Number 3,907,034 4,862,991 4,881,208 4,951,267 5,497,658 5,619,475 5,789,669	Number         Date           3,907,034         09/23/75           4,862,991         09/05/89           4,881,208         11/14/89           4,951,267         08/21/90           5,497,658         03/12/96           5,619,475         04/08/97           5,789,669         08/04/98	Number         Date         Name           3,907,034         09/23/75         Suman, Jr.           4,862,991         09/05/89         Hoyle et al.           4,881,208         11/14/89         Liu           4,951,267         08/21/90         Chang et al.           5,497,658         03/12/96         Fletcher et al.           5,619,475         04/08/97         Winkler           5,789,669         08/04/98         Flaum	Number         Date         Name         Class           3,907,034         09/23/75         Suman, Jr.         166           4,862,991         09/05/89         Hoyle et al.         181           4,881,208         11/14/89         Liu         367           4,951,267         08/21/90         Chang et al.         367           5,497,658         03/12/96         Fletcher et al.         73           5,619,475         04/08/97         Winkler         367           5,789,669         08/04/98         Flaum         73	Number         Date         Name         Class         class           3,907,034         09/23/75         Suman, Jr.         166         250           4,862,991         09/05/89         Hoyle et al.         181         106           4,881,208         11/14/89         Liu         367         35           4,951,267         08/21/90         Chang et al.         367         31           5,497,658         03/12/96         Fletcher et al.         73         151           5,619,475         04/08/97         Winkler         367         27           5,789,669         08/04/98         Flaum         73         152.51

## FOREIGN PATENT DOCUMENTS

Exam	Document			İ	Sub-	Trans	<u>lation</u>
Init.	 Number	Date	Country	Class	class	Yes	No
	GB2293652A	14.08.95	U.K.	6	G01V 1/48		
			·				

# OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

- N. Morita. "Field and Laboratory Verifications of Sand Production Prediction Models". 7-10 Feb. 1994. SPE 27341, pp. 19-28.
- J. Zhang et al. "Mechanical Strength of Reservoir Materials: Key Information for Sand Prediction". SPE 49134, 27-30 Sept. 1998, pp. 423-430.
- H. Asheim. "Determination of Perforation Schemes to Control Production and Injection Profiles Along Horizontal Wells". SPE, March 1997, pp. 13-17.
- C. Presles et al. "A Sand Failure Test can Cut Both Completion Costs and the Number of Development Wells". SPE 38186, March 1997, pp. 13-17.
- **F. Sanfilippo et al.** "Sand Production: from Prediction to Management". SPE 38185, (1997), pp. 389-398.
- J. Tronvoll et al. "Sand Production: Mechanical Failure or Hydrodynamic Erosion?" Int. J. Rock Mech. & Min. Sci., Vol 34, No.3/4, Paper No. 291, (1997), pp. 1-11.
- A. Skjaerstein et al. "Hydrodynamic Erosion: A Potential Mechanism of Sand Production in Weak Sandstones". Int. J. Rock Mech. & Min. Sci., Vol. 34, No. 3-4, Paper No. 292 (1997), pp. 1-20.

•
ļ



,	T. E. Unander et al. 'Flow Geometry Effects on Sand Production from Oil Producing
	Perforation Cavity". Int. J. Rock Mech. & Min. Sci., Vol. 34, No. 3/4, Paper No. 293
	(1997), pp. 1-11.
	H. Vaziri. 'Physical Modeling of Sand Production'. Int. J. Rock Mech. & Min. Sci., Vol.
	34, No. 3/4, Paper No. 323 (1997), pp. 1-19.
	R. M. O'Connor et al. "Discrete Element Modeling of Sand Production". Int. J. Rock
	Mech. Min. Sci., Vol. 34, No. 3/4, Paper No. 231 (1997), pp. 1-19.
	A. Skjaerstein et al. "Effect of Water Breakthrough on Sand Production: Experimental
	and Field Evidence". SPE 38806 (1997), pp. 565-575.
	J. Bear. "Dynamics of Fluids in Porous Media". Elsevier (1988), pp. 165-167.  E. Fjaer et al. "Petroleum Related Rock Mechanics". Elsevier (1992). pp. 109-134.
	R. A. Plumb. "Influence of Composition and Texture on the Failure Properties of Clastic Rocks". Eurock '94, (1994) pp. 13-20.
	E. Papamichos et al. "Size Dependency of Castlegate and Berea Sandstone Hollow-Cylinder Strength on the Basis of Bifurcation Theory". Rock Mechanics (1995), pp. 301-306.
	J. Tronvoll et al. "Perforation Cavity Stability: Investigation of Failure Mechanisms". Geotech. Eng. of Hard Soils-Soft Rocks (1993), pp. 1687-1693
	J. Weingarten. "Prediction of Sand Production in Gas Wells: Methods and Gulf of Mexico Case Studies". SPE 24797 (1992), pp. 317-324.
	P. A. Fletcher. "Optimizing Hydraulic Fracture Length to Prevent Formation Failure in Oil and Gas Reservoirs". Rock Mechanics (1995), pp. 293-298.
	R. Risnes et al. "Sand Stresses Around a Wellbore". SPE 9650 (1982), pp. 709-720.
	W. F. Chen et al. "Non-linear Analysis in Soil Mechanics: Theory and Implementation", Dev. in Geotech. Eng. 53 (1990), pp. 36-39.
·	
EXAMINER	DATE CONSIDERED

**EXAMINER:** Initial if citation considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant

57.0328

APPLICANT(S): Paños PAPANASTASIOU

APPL. NO.:

10/009,505

FILING DATE:

December 5, 2001

TITLE:

CAVITY STABILITY PREDICTION METHOD

FOR WELLBORES

PAPERS:

Status Inquiry

# DT05 Rec'd PCT/PTO 29 JUL 2002

PAPER DATE:

JULY 23, 2002

WBO	JD C	RSO	LAG
SDR	IP L	AW D	EPT
REC'D:	AUG 1	2 2002	
<b></b>	co		
FILE NO	<u>5.1.</u>	0395	<u></u>
MT ACTION	<del></del>		<del></del>
DUE DATE.			



# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

n re Application of	) Oroup Art Unit:
Panos PAPANASTASIOU	) Oroup Art Office.
Serial Nº: 10/009.505	) ) ) Examiner:
Filed: December 5, 2001	) Examiner.
For: CAVITY STABILITY PREDICTION	,
FOR WELLBORES	) Attorney Docket N°: ) 57.0328
I hereby certify th	Certificate of Mailing not this correspondence is being deposited with the United States Postal
Service on the dat	e shown below with sufficient postage as First Class Mail in an envelope stant Commissioner for Patents. Box SN, Washington, D.C. 20231.
Lorraine Ronnlund	Date

### STATUS INQUIRY

ASSISTANT COMMISSIONER FOR PATENTS Box SN Washington, D.C. 20231

Sir:

This patent application has been on file since December 5, 2001. An Information Disclosure Statement was filed February 6, 2002. We are currently waiting for the Official "Filing Receipt" and "Notice To File Missing Parts. Filing Date Granted" documents so that we may submit the Declaration and Power of Attorney for the above noted application.

Please advise of the status of this case, and when Applicant may expect to receive the above mentioned documents.

Respectfully submitted,

William B. Batzer Registration N° 37,088

Schlumberger-Doll Research 36 Old Quarry Road Ridgefield, Connecticut 06877-4108 (203) 431-5506

Date: JULY 23, 2002

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	)
Panos PAPANASTASIOU	)
Application No.: 10/009,505	) Group Art Unit:
Filed: December 5, 2001	) Examiner:
Title: CAVITY STABILITY PREDICTION METHOD FOR WELLBORES	) Docket N°: 57.0328-WO

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Box PCT, Washington, D.C. 20231 on November 11, 2002.

Ruth A. Schreiber

les 11-11-02

### SUBMISSION OF MISSING PARTS

**Assistant Commissioner for Patents** Box PCT Washington, D.C. 20231

Sir:

In accordance with the "Notification of Missing Requirements Under 35 U.S.C. 371 In the United States Designated/Elected Office (DO/EO/US)", mailed February 6, 2002 and attached hereto, enclosed please find the executed Declaration and Power of Attorney for the above-identified application.

The surcharge of \$130.00 was already paid on Form PTO-1390, page 2 of 2 that accompanied the application. A Petition Under 37 CFR 1.181 To Reset the Period for Response and to accept this Submission of Missing Parts as being timely filed is being filed concurrently herewith. Applicant does not believe a fee is due. In the event this is incorrect, the Commissioner is hereby authorized to credit/charge Deposit Account No. 19-0615. Two copies of this sheet are attached.

Respectfully submitted,

William B. Batzer Registration No. 37,088

Schlumberger-Doll Research 36 Old Quarry Road Ridgefield, Connecticut 06877-4108

Phone: (203) 431-5506 Fax: (203) 431-5640 November 11, 2002









### UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents, Boy PCT Umted States Patent and Trademark Office Washington, D.C., 2021 www.sabs.gov

U.S. APPLICATION NUMBER NO.	FIRST NAMED APPLICANT		ATTY. DOCKET NO.	
10/009,505	Panos PAPANASTASIOU	IOU US 57.0328  INTERNATIONAL APPLICATION NO.  PCT/GB00/02471		
•	_			
William B Batzer		I.A. FILING DATE	PRIORITY DATE	
Schlumberger-Doll Research	_	06/22/2000	06/23/1999	

William B Batzer Schlumberger-Doll Research 36 Old Quarry Road Ridgefield, CT 06877-4108

CONFIRMATION NO. 5010
371 FORMALITIES LETTER
\*OC000000000999717\*
\*OC000000000999717\*

Date Mailed: 11/13/2002

# NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as an Elected Office (37 CFR 1.495):

- U.S. Basic National Fees
- Priority Document
- Copy of IPE Report
- · Copy of references cited in ISR
- Copy of the International Application
- Copy of the International Search Report

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

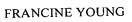
 Oath or declaration of the inventors, in compliance with 37 CFR 1.497(a) and (b), identifying the application by the International application number and international filing date.

ALL OF THE ITEMS SET FORTH ABOVE MUST BE SUBMITTED WITHIN TWO (2) MONTH FROM THE DATE OF THIS NOTICE OR BY 22 or 32 MONTHS (where 37 CFR 1.495 applies) FROM THE PRIORITY DATE FOR THE APPLICATION, WHICHEVER IS LATER. FAILURE TO PROPERLY RESPOND WILL RESULT IN ABANDONMENT.

The time period set above may be extended by filing a petition and fee for extension of time under the provisions of 37 CFR 1.136(a).

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

A copy of this notice MUST be returned with the response.



Telephone: (703) 305-3662

# PART 2 - OFFICE COPY

		ATTIV DOCKET NO
U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY, DOCKET NO.
U.S. APPLICATION NOMBLE NO.	PCT/CD00/02471	US 57.0328
10/009,505	PCT/GB00/02471	000,0020

FORM PCT/DO/EO/905 (371 Formalities Notice)